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Water found in Pine

By Max Foster

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The long-held notion that there is no substantial groundwater in Pine is a myth.

Evidence groundwater exists in the tiny mountain hamlet turned up Sept. 25 when a well drilled in a six-acre field about 100 yards south of the Ponderosa Market began producing water.

Ray Pugel, Mike Ploughe and Robert Randall watch as water is pumped out of a newly drilled well located just south of the Ponderosa Market in Pine. Ploughe, a hydrogeologist who found the water, has said the well is historically significant. Pugle and Randall own the well.

Ray Pugel and Robert Randall own the land, and footed a considerable bill for drilling the well and installing pumps.

In pumping test results sent to Pugel and Randall, hydrogeologist Michael Ploughe wrote, "The new well you have installed in Pine is a very capable well. Historically, this is indeed a very significant well for the Pine area."

Ploughe has recommended that the seven-day constant rate of pumping not exceed 150 gallons a minute, but said higher rates could be attained with further well development.

He estimates with some modification, pumping rates of 300 to 500 gpm could be attained.

"That is significant, most wells in the Pine area produce 30 to 50 gpm at the maximum," Ploughe said. "There are not 10 wells (in the Rim Country) that can produce over 200 gpm."

During seven days of testing, the well produced more than 245,000 gallons of groundwater and recovered within 30 minutes to 95 percent of its pre-pumping level. Ploughe called the recovery rate "remarkable and impressive."

All tests done by Ploughe, including ones for pH levels, temperature, taste, odor and conductivity, showed the well water is of excellent quality. But, water samples must now be sent to the Arizona Department of Environmental Quality for testing. Ploughe said he anticipates the samples will pass all ADEQ tests.

Pugel -- waving a copy of the *Declaration of Independence* -- said discovery of the water was similar to the historical document in that the water could provide independence for the people of Pine.

"Everything changed in Pine on Sept. 25," he said. "It's a new era."

District 1 Gila County Supervisor Tommie Martin agreed saying, "For so long, the truth was there is no water in Pine and now that's

not the truth any longer." Martin visited the well last week, tasted the water and gazed in disbelief as it flowed freely from the pump.

"It just gave me goose bumps watching it," she said.

The discovery of water in Pine comes on the heels of another successful well that was drilled for the Strawberry Hollow Domestic Water Improvement District.

Ploughe was also instrumental in finding that water source, which is owned by a company operated by Loren Petersen.

"We have received a 100-year water adequacy (certification) from the Arizona Department of Water Resources," Petersen said.

Ploughe and Pugel anticipate the Pine well will also receive the 100-year adequacy approval.

"We have the potential to be the first community in Gila County to have two wells with assured 100-year water supplies," Pugel said.

Finding the water

Ploughe was able to pinpoint water sources in Strawberry Hollow and Pine partly because of the time he spent in the Rim Country as a student at Arizona State University.

"Studying geology, our class traveled to Camp Tontozona and there I watched where water flowed, which way it flowed and where there were pools," he said. "Those experiences stuck in my mind."

When he eventually moved to Payson to become the Town of Payson hydrologist, Ploughe listened as others complained about the lack of water in the Rim Country.

"I felt like I was obligated to do something," he said.

So, he began to study aerial maps, scientific information, geological formations and eventually founded Highland Water Resources Consulting, Inc.

It was during his part-time and weekend work with Highland that he contracted to help Pugel, Petersen and Randall find water. He eventually decided the answer was to drill deeper wells.

"The water is in the lower aquifers," he said. "All the wells that have been drilled are in the shallow aquifers." Knowing that, his advice to his clients was to plan for deep drilling.

At the Pine site, no water was encountered until the drills were 615 feet below the surface. The goal was to drill to 1,200 feet, but at 1,045 feet the decision was made to stop.

"We had so much water we couldn't drill (any longer)," Pugel said.

With the well now producing water, Pugel and Randall must decide whether to upgrade pumps so the well will produce maximum water flow and also how best to use the water.

"We are working on answers, this whole thing has been a roller coaster ride," Pugel said.

There's more to the story:

Story 1: Water found in Pine. Today